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Piezoelectric component production by sol-gel coating of a metal substrate

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Abstract of **DE19744630**

Piezoelectric components are produced by applying a coating sol of a hydrated lead salt, zirconium and titanium alcoholates and a complexing agent onto an electrically conductive substrate, and then heat treating. Piezoelectric components are produced by: (a) preparing a storable solid precursor of a coating sol of a hydrated lead salt, a zirconium alcoholate and a titanium alcoholate by using a complexing agent and carrying out a hydrolysis reaction and vacuum extraction of solid constituents; (b) dissolving the solid precursor in a solvent; (c) applying the resulting sol as one or more layers on one or both sides of an electrically conductive substrate of steel, Ti, Cr, Ni or their alloys; (d) heat treating the layer(s); and (e) applying one or more electrodes onto the resulting thin ferroelectric layer or multilayer system.